What is claimed is:

1. A two-cycle combustion engine which comprises:

a first scavenging passage for communicating between a combustion chamber and a crank chamber through a bearing for a crankshaft;

a second scavenging passage for communicating directly between the combustion chamber and the crank chamber;

a suction chamber formed in a side face of a piston;

an air-fuel mixture passage for introducing an air-fuel mixture M into the suction chamber; and

an air passage for introducing an air into the crank chamber;

wherein during an intake stroke of the engine, the air-fuel mixture from the air-fuel mixture passage is introduced into the first scavenging passage through the suction chamber and the air from the air passage is introduced into the crank chamber; and

wherein during a scavenging stroke of the engine, introduction of the air within the crank chamber into the combustion chamber through the second scavenging passage takes place before the air-fuel mixture within the first scavenging passage is introduced into the combustion chamber.

2. A two-cycle combustion engine which comprises:

a first scavenging passage for communicating directly between a combustion chamber and a crank chamber;

a second scavenging passage for communicating between the combustion chamber and the crank chamber through a bearing for a crankshaft;

a suction chamber formed in a side face of a piston;

an air passage for introducing an air into the suction chamber; and

an air-fuel mixture passage for introducing an air-fuel mixture into the crank chamber;

wherein during an intake stroke of the engine, the air from the air passage is introduced into the second scavenging passage through the suction chamber

and the air-fuel mixture from the air-fuel mixture passage is introduced into the crank chamber; and

wherein during a scavenging stroke of the engine, introduction of the air within the second scavenging passage into the combustion chamber takes place before the air-fuel mixture within the crank chamber is introduced into the combustion chamber through the first scavenging passage.

3. A two-cycle combustion engine which comprises:

a first scavenging passage for communicating directly between a combustion chamber and a crank chamber;

a second scavenging passage for communicating between the combustion chamber and the crank chamber through a bearing for a crankshaft;

an air passage for introducing an air into the second scavenging passage;

a reed valve disposed in the air passage; and

an air-fuel mixture passage for introducing an air-fuel mixture into the crank chamber;

wherein during an intake stroke of the engine, the air from the air passage is introduced into the second scavenging passage through the reed valve and the air-fuel mixture from the air-fuel mixture passage is introduced into the crank chamber; and

wherein during a scavenging stroke of the engine, introduction of the air within the second scavenging passage into the combustion chamber takes place before the air-fuel mixture within the crank chamber is introduced into the combustion chamber through the first scavenging passage.

4. The two-cycle combustion engine as claimed in Claim 1, further comprising a third scavenging passage for communicating directly between the combustion chamber and the crank chamber;

the third scavenging passage being positioned at a location closer to the exhaust port than the second scavenging passage in the direction circumferentially of the combustion chamber; and

wherein during the scavenging stroke, introduction of the air within the crank chamber into the combustion chamber through the second scavenging passage takes place before an air-fuel mixture introducing timing, at which the air-fuel mixture within the first scavenging passage is introduced into the combustion chamber, and, simultaneously with the air-fuel mixture introducing timing or at a timing thereafter, introduction of the air within the crank chamber through the third scavenging passage takes place.

5. The two-cycle combustion engine as claimed in Claim 1, wherein the piston has a lubricant passage formed therein for supplying the air-fuel mixture within the suction chamber to a small end bearing disposed between a piston pin and a connecting rod.

6. The two-cycle combustion engine as claimed in Claim 2, further comprising an air regulating valve for closing the air passage when a pressure inside the air passage decreases to a value equal to or lower than a predetermined value.

7. The two-cycle combustion engine as claimed in Claim 2 or 3, wherein an opening of the first scavenging passage towards the crank chamber is closed by the piston before the piston reaches a bottom dead center.

8. The two-cycle combustion engine as claimed in Claim 4, wherein an opening of the second scavenging passage towards the crank chamber is closed by the piston before the piston reaches a bottom dead center.

9. A two-cycle combustion engine which comprises:

a first scavenging passage for communicating directly between a combustion chamber and a crank chamber;

a second scavenging passage for communicating between the combustion chamber and the crank chamber through a bearing for a crankshaft;

an air-fuel mixture passage for introducing an air-fuel mixture into the first scavenging passage;

an air passage for introducing an air into the second scavenging passage;

a first reed valve disposed in the air-fuel mixture passage;

a second reed valve disposed in the air passage;

wherein during an intake stroke of the engine, the air-fuel mixture from the air-fuel mixture passage is introduced into the first scavenging passage and the air from the air passage is introduced into the second scavenging passage; and

wherein during a scavenging stroke of the engine, introduction of the air within the second scavenging passage into the combustion chamber takes place before the air-fuel mixture within the first scavenging passage is introduced into the combustion chamber.

10. The two-cycle combustion engine as claimed in any one of Claims 1, 2, 3 and 9, wherein the second scavenging passage is positioned at a location closer to an exhaust port than the first scavenging passage in a direction circumferentially of the combustion chamber.

11. A two-cycle combustion engine, which comprises:

a needle bearing for supporting a crankshaft within a crankcase;

first and second scavenging passages for communicating between a combustion chamber and a crank chamber;

an air-fuel mixture passage for introducing an air-fuel mixture into the crank chamber or the first scavenging passage during an intake stroke;

an air passage for introducing an air into the second scavenging passage or the crank chamber during the intake stroke; and

a communicating hole for fluidly connecting the first or second scavenging passage with the needle bearing;

wherein during a scavenging stroke of the engine, introduction of the air within the second scavenging passage into the combustion chamber takes place prior to the air-fuel mixture within the first scavenging passage being introduced into the combustion chamber; and

wherein an opening of a lower end of the second scavenging passage towards the crank chamber is positioned at a location adjacent a region radially outwardly of the needle bearing.